# **EXHIBIT I**

25 October 2019 Equity Research Americas | United States

# CREDIT SUISSE

## **Apache Corporation**

## Resignation of Exploration Head Highlights Suriname Risk to Share Price

Oil & Gas Exploration & Production | Company Update

- Senior VP of Worldwide Exploration (Steven Keenan) resigns. For reference, Mr. Keenan moved from EOG to APA in 2014 as Regional VP of Unconventional Resources and subsequently oversaw the discovery of the Alpine High play, which has been an economic disappointment for investors (at least partly due to depressed natural gas and NGL prices). Nonetheless, since APA unveiled the play in September 2016, its shares have underperformed global E&Ps by >30%, likely a cause for Mr. Keenan's resignation. More recently, APA has ventured into Suriname where it is currently drilling one of the most highly-anticipated exploration wells of the year, given close proximity to the Stabroek block offshore Guyana where >6 BBoe of oil-weighted resource has been discovered to date.
- Timing of resignation is concerning. While Mr. Keenan's exact role in Suriname is not clear (APA claims the resignation is not connected to the exploration prospect), APA is underperforming peers by >5% today given the timing of the departure of the head of Worldwide Exploration when the company is on the 31<sup>st</sup> day of drilling the Suriname well, i.e. is now within the expected 30-60 day spud-to-TD window. Today's sell-off nonetheless highlights the high expectations for the well already baked into APA's stock price (more detail below).
- Suriname discovery more than baked in already; we see considerable downside risk if well is dry. At current strip prices, we have APA trading at a ~1-2 turn premium to peers on 2020-21E EV/DACF (vs. its historical >1x discount) despite >60% of its cash flow coming from lower-multiple North Sea/Egypt assets. Given its wide relative premium, we estimate shares have priced in a >750 MMBoe discovery in Suriname already & could see meaningful downside risk in the event the well is unsuccessful: we'd note our 2P NAV (which excludes any Suriname value) at strip prices is ~\$10/share. Getting to a 2020 EV/DACF multiple more in line with peers implies a stock price in the mid-to-high teens.
- Expensive vs. peers. Our \$20 TP is based on ~5.0x normalized 2020E DACF.

### **APA**

Target price (12M, US\$) 20.00 Neutral<sup>[V]</sup>

Price (24 Oct 19, US\$)	23.23
52-week price range	37.83 - 19.93
Market cap (US\$ m)	8,733.53
Enterprise value (US\$ m)	19,100
[V] = Stock Considered Volatile (see Dis	closure Appendix)

#### Research Analysts

#### William Featherston

212 325 6283 william.featherston@credit-suisse.com

#### William Janela, CFA

212 325 2646 william.janela@credit-suisse.com

#### Michael Ziffer, CFA

212 538 0568 michael.ziffer@credit-suisse.com

#### Christopher Zhang, CFA

212 325 4431 chris.zhang@credit-suisse.com

#### Financial and valuation metrics

Source: Company data, Refinitiv, Credit Suisse estimates

Year	12/18A	12/19E	12/20E	12/21E
EBITDX (US\$ m)	4,904.0	3,952.7	3,735.3	3,802.6
CFPS (US\$)	8.10	7.10	7.30	7.45
Prev. CFPS (US\$)	-	-	-	-
DACF	3,325.4	2,858.5	3,081.6	3,170.7
ROACE (%)	0.06	0.02	0.01	0.01
EV/EBITDX	3.7	4.5	4.8	4.7
EV/DACF	5.4	6.3	5.8	5.7
Net debt (US\$ m)	9,250	10,367	10,859	11,431
EPS (CS Adj.) (US\$)	1.77	0.35	-0.20	-0.30
Dividend (current gtr., US\$)	376.2	Dividend yield (%)		4.3
Net debt (current, US\$)	10,226.4	Net debt/Cap (%)		0.61
NAV/share (12/19E, US\$ m)	13.86	Net debt/EBITDX (x)		2.62
P/NAV (x)	1.7	Number of shares (m)		376.0
Free float (%)	89.8			
NAV/share (12/19E, US\$ m) P/NAV (x)	13.86 1.7	Net debt/EBITDX (x)		2.62

#### Share price performance



On 24-Oct-2019 the S&P 500 INDEX closed at 3010.29Daily Oct25, 2018 - Oct24, 2019, 10/25/18 = US\$38.15

Quarterly CFPS	Q1	Q2	Q3	Q4
2018A	1.76	2.07	2.27	2.00
2019E	1.76	1.62	1.55	2.16
2020E				

DISCLOSURE APPENDIX AT THE BACK OF THIS REPORT CONTAINS IMPORTANT DISCLOSURES, ANALYST CERTIFICATIONS, LEGAL ENTITY DISCLOSURE AND THE STATUS OF NON-US ANALYSTS. US Disclosure: Credit Suisse does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.



## Apache Corporation (APA)

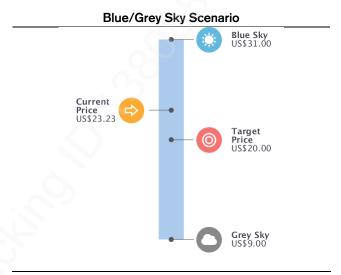
Price (24 Oct 2019): **US\$23.23** Target Price: 20.00 Income Statement 12/18A 12/20E 12/21E EBITDX (US\$ m) 4,904 3.953 3,735 3.803 DACF 3 325 3.082 3.171 2.858 400 Net interest income (exp) 384 393 400 Net non operating inc (exp) 0 0 5 12 Share of associates/JVs' equity 19 Exceptionals 0 0 5 Profit before tax (US\$ m) 1,718 728 279 248 Taxes 779 399 119 99 Profit after tax 946 330 168 149 Extraordinary gain/(loss) 0 0 0 0 Non-controlling interest (minority) Preferred dividends Adjusted net income (US\$ m) 946 330 168 149 12/18A 12/19E 12/20E 12/21E Change in working capital 245 Ω 40 2,216 1,430 1,699 2,109 Other cash and non-cash items 3,777 2,783 2,852 Cash flow from operations 2.860 (4,168)(2,619)(2,745)(3.771)Capex . Acquisitions (34)(133)(34)(34)Divestments Other investment/(outflows) (3.944)(3.556)(2.653)(2,779)Cashflow from investment Operating cash flow 3.777.0 2.860.0 2.783.2 2.852.2 12/21E **Balance Sheet** 12/18A 12/19E 12/20E Cash and cash equivalents 2,687 2,711 2,608 2,606 Other current assets Total current assets 2,687 2,711 2,608 2,606 Total fixed assets 18,421 18,211 18,129 18,079 474 1,259 1,259 1,259 Other assets Total assets 21,582 21,996 21,944 22.181 Total current liabilities 2,262 2,262 2.201 2,262 8,054 8,692 9,081 9,651 Long-term debt Other Liabilities 3,059 2,515 2,797 2,921 **Total liabilities** 12,770 13,751 14,264 14,973 Shareholders' equity 7,130 6,307 5,608 4,847 Minority interest 1,682 2,124 2,124 2,124 Total equity and liabilities 21,582 22,181 ,996 21,944 Per share 12/18A 12/19E 12/20E 12/21E Equiv. FPO (period Avg.) (mn) 383.25 376.48 378.96 380.96 CFPS (US\$) 8.10 7.10 7.30 7.45 Prev. CFPS (US\$) 1.00 1.00 DPS (US\$) 1.00 **Total Production** 12/18A 12/19E 12/20E 12/21E 488.4 506.6 Total Production (MBoed) 465.9 471.0 241.2 Oil Production (MBbld) 245.4 238.0 235.2 NGL Production (MBbld) 59.6 73.2 97.9 110.1 Gas Production (MMcfd) 939.7 914.9 967.7 Valuation 12/19E 12/21E 12/18A 12/20E Dividend yield (%) 4.3 43 4.3 43 FCF yield (%) (0.2)(16.5)32 (4.2)EV/EBITDX (x) 4.8 47 Returns 12/18A 12/19E 12/20E 12/21E **ROE** (%) 0.09 0.02 (0.01)(0.02)ROACE (avg.) (%) 0.06 0.02 0.01 0.01 12/18A 12/19E 12/20E 12/21E Gearing Net debt/Cap (%) 105.0 123.0 140.4 164.0 Interest coverage ratio (X) 5.5 29 1.7 1.6

Source: Company data. Refinitiv. Credit Suisse estimates

## Analyst: William Featherston Rating: Neutral [V]

#### Company Background

Apache is an oil and gas exploration and production company engaged in the acquisition, exploration, development, and production of oil and gas in the onshore US, Gulf of Mexico, Egypt, and North Sea.



#### Our Blue Sky Scenario (US\$)

31.00

Our Blue Sky Scenario assumes a flat \$10/Bbl and \$0.25/MMBtu premium to the Credit Suisse long-term, normalized price deck. However, we note that at these oil and gas prices, APA would be generating additional free cash flow versus our base case. This extra cash would allow the company to accelerate drilling activity which could provide additional upside.

#### Our Grey Sky Scenario (US\$) 9.00

Our Grey Sky Scenario assumes a \$10/Bbl and \$0.25/MMBtu discount to the Credit Suisse long-term, normalized price deck. However, we note that at these oil and gas prices, APA would be generating less free cash flow which could mean lower drilling activity than our base case. Under this scenario, value would be deferred and further downside could be warranted.



On 24-Oct-2019 the S&P 500 INDEX closed at 3010.29 Daily Oct25, 2018 - Oct24, 2019, 10/25/18 = US\$38.15



Companies Mentioned (*Price as of 24-Oct-2019*) Apache Corporation (APA.N, \$23.23, NEUTRAL[V], TP \$20.0)

#### Disclosure Appendix

#### **Analyst Certification**

I, William Featherston, certify that (1) the views expressed in this report accurately reflect my personal views about all of the subject companies and securities and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

#### 3-Year Price and Rating History for Apache Corporation (APA.N)

APA.N	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
26-Oct-16	61.68	64.00	N
03-Nov-16	55.52	72.00	
15-Nov-16	63.39	77.00	
30-Mar-17	52.09	73.00	
06-Apr-17	52.96	70.00	
10-Jul-17	47.11		NC
11-Dec-17	40.19	40.00	N *
22-Jan-18	47.66	43.00	
22-Feb-18	34.85	39.00	
12-Apr-18	39.38	40.00	
10-Jul-18	48.61	46.00	
19-Dec-18	28.75	36.00	
28-Feb-19	33.18	37.00	
02-May-19	29.78	33.00	
09-Jul-19	26.95	25.00	
03-Oct-19	23.37	20.00	



Effective July 3, 2016, NC denotes termination of coverage.

#### As of December 10, 2012 Analysts' stock rating are defined as follows:

**Outperform (O):** The stock's total return is expected to outperform the relevant benchmark\* over the next 12 months.

**Neutral (N):** The stock's total return is expected to be in line with the relevant benchmark\* over the next 12 months.

**Underperform (U):** The stock's total return is expected to underperform the relevant benchmark\* over the next 12 months.

\*Relevant benchmark by region: As of 10th December 2012, Japanese ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. As of 2nd October 2012, U.S. and Canadian as well as European ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. For Latin American and Asia stocks (excluding Japan and Australia), ratings are based on a stock's total return relative to the average total return of the relevant country or regional benchmark (India - S&P BSE Sensex Index); prior to 2nd October 2012 U.S. and Canadian ratings were based on (1) a stock's absolute total return potential to its current share price and (2) the relative attractiveness of a stock's total return potential within an analyst's coverage universe. For Australian and New Zealand stocks, the expected total return (ETR) calculation includes 12-month rolling dividend yield. An Outperform rating is assigned where an ETR is greater than or equal to 7.5%; Underperform where an ETR less than or equal to 5%. A Neutral may be assigned where the ETR is between -5% and 15%. The overlapping rating range allows analysts to assign a rating that puts ETR in the context of associated risks. Prior to 18 May 2015, ETR ranges for Outperform and Underperform ratings did not overlap with Neutral thresholds between 15% and 7.5%, which was in operation from 7 July 2011.

**Restricted (R):** In certain circumstances, Credit Suisse policy and/or applicable law and regulations preclude certain types of communications, including an investment recommendation, during the course of Credit Suisse's engagement in an investment banking transaction and in certain other circumstances.

Not Rated (NR): Credit Suisse Equity Research does not have an investment rating or view on the stock or any other securities related to the company at this time.

**Not Covered (NC):** Credit Suisse Equity Research does not provide ongoing coverage of the company or offer an investment rating or investment view on the equity security of the company or related products.

**Volatility Indicator [V]:** A stock is defined as volatile if the stock price has moved up or down by 20% or more in a month in at least 8 of the past 24 months or the analyst expects significant volatility going forward.

Analysts' sector weightings are distinct from analysts' stock ratings and are based on the analyst's expectations for the fundamentals and/or valuation of the sector\* relative to the group's historic fundamentals and/or valuation:

Overweight: The analyst's expectation for the sector's fundamentals and/or valuation is favorable over the next 12 months.

<sup>\*</sup> Asterisk signifies initiation or assumption of coverage.

25 October 2019



Market Weight: The analyst's expectation for the sector's fundamentals and/or valuation is neutral over the next 12 months. **Underweight:** The analyst's expectation for the sector's fundamentals and/or valuation is cautious over the next 12 months. \*An analyst's coverage sector consists of all companies covered by the analyst within the relevant sector. An analyst may cover multiple sectors.

Credit Suisse's distribution of stock ratings (and banking clients) is:

### Global Ratings Distribution

Rating	Versus universe (%)	Of which banking clients (%)
Outperform/Buy*	47%	(32% banking clients)
Neutral/Hold*	38%	(27% banking clients)
Underperform/Sell*	13%	(23% banking clients)
Restricted	2%	

<sup>\*</sup>For purposes of the NYSE and FINRA ratings distribution disclosure requirements, our stock ratings of Outperform, Neutral, and Underperform most closely correspond to Buy, Hold, and Sell, respectively; however, the meanings are not the same, as our stock ratings are determined on a relative basis. (Please refer to definitions above.) An investor's decision to buy or sell a security should be based on investment objectives, current holdings, and other individual factors.

#### **Important Global Disclosures**

Credit Suisse's research reports are made available to clients through our proprietary research portal on CS PLUS. Credit Suisse research products may also be made available through third-party vendors or alternate electronic means as a convenience. Certain research products are only made available through CS PLUS. The services provided by Credit Suisse's analysts to clients may depend on a specific client's preferences regarding the frequency and manner of receiving communications, the client's risk profile and investment, the size and scope of the overall client relationship with the Firm, as well as legal and regulatory constraints. To access all of Credit Suisse's research that you are entitled to receive in the most timely manner, please contact your sales representative or go to <a href="https://plus.credit-suisse.com">https://plus.credit-suisse.com</a>.

Credit Suisse's policy is to update research reports as it deems appropriate, based on developments with the subject company, the sector or the market that may have a material impact on the research views or opinions stated herein.

Credit Suisse's policy is only to publish investment research that is impartial, independent, clear, fair and not misleading. For more detail please refer to Credit Suisse's Policies for Managing Conflicts of Interest in connection with Investment Research: https://www.creditsuisse.com/sites/disclaimers-ib/en/managing-conflicts.html.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

Credit Suisse has decided not to enter into business relationships with companies that Credit Suisse has determined to be involved in the development, manufacture, or acquisition of anti-personnel mines and cluster munitions. For Credit Suisse's position on the issue, please see https://www.credit-suisse.com/media/assets/corporate/docs/about-us/responsibility/banking/policy-summaries-en.pdf.

The analyst(s) responsible for preparing this research report received compensation that is based upon various factors including Credit Suisse's total revenues, a portion of which are generated by Credit Suisse's investment banking activities

#### **Target Price and Rating**

Valuation Methodology and Risks: (12 months) for Apache Corporation (APA.N)

Method: Our 12-month target price of \$20 per share for Apache Corp. assumes the stock trades to ~5x normalized 2020E DACF, in line with its historical average. Our Neutral rating is a function of total shareholder return over the next twelve months and the relative risk/reward versus our coverage universe.

Risk: We see several risks to APA achieving our \$20 TP and our Neutral rating. APA has >10% of its production coming from Egypt, where political, social and economic conditions in the country could significantly worsen, and may lead to a reduction in the company's production, profits and stock price. In general, oil and gas companies are subject to changes in global commodity supply/demand, as well as geopolitical related issues that could adversely affect the company's ability to achieve our TP and could potentially lower our Rating.

Please refer to the firm's disclosure website at https://rave.credit-suisse.com/disclosures/view/selectArchive for the definitions of abbreviations typically used in the target price method and risk sections.

See the Companies Mentioned section for full company names

Credit Suisse currently has, or had within the past 12 months, the following as investment banking client(s): APA.N

Credit Suisse provided investment banking services to the subject company (APA.N) within the past 12 months.

Within the last 12 months, Credit Suisse has received compensation for non-investment banking services or products from the following

Credit Suisse has managed or co-managed a public offering of securities for the subject company (APA.N) within the past 12 months.

Within the past 12 months, Credit Suisse has received compensation for investment banking services from the following issuer(s): APA.N

Credit Suisse expects to receive or intends to seek investment banking related compensation from the subject company (APA.N) within the next

Credit Suisse currently has, or had within the past 12 months, the following issuer(s) as client(s), and the services provided were noninvestment-banking, non securities-related: APA.N

Credit Suisse or a member of the Credit Suisse Group is a market maker or liquidity provider in the securities of the following subject issuer(s): APA.N

#### Case 4:21-cv-00575 Document 117-10 Filed on 06/16/23 in TXSD Page 6 of 7

25 October 2019



A member of the Credit Suisse Group is party to an agreement with, or may have provided services set out in sections A and B of Annex I of Directive 2014/65/EU of the European Parliament and Council ("MiFID Services") to, the subject issuer (APA.N) within the past 12 months.

For date and time of production, dissemination and history of recommendation for the subject company(ies) featured in this report, disseminated within the past 12 months, please refer to the link: <a href="https://rave.credit-suisse.com/disclosures/view/report?i=466858&v=53gr6kskszt87axtnwl1dwzkg">https://rave.credit-suisse.com/disclosures/view/report?i=466858&v=53gr6kskszt87axtnwl1dwzkg</a>.

#### **Important Regional Disclosures**

Singapore recipients should contact Credit Suisse AG, Singapore Branch for any matters arising from this research report.

The analyst(s) involved in the preparation of this report may participate in events hosted by the subject company, including site visits. Credit Suisse does not accept or permit analysts to accept payment or reimbursement for travel expenses associated with these events.

For Credit Suisse Securities (Canada), Inc.'s policies and procedures regarding the dissemination of equity research, please visit https://www.credit-suisse.com/sites/disclaimers-ib/en/canada-research-policy.html.

Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment.

This research report is authored by:

Credit Suisse Securities (USA) LLC. William Featherston; William Janela, CFA; Michael Ziffer, CFA; Christopher Zhang, CFA

Important disclosures regarding companies that are the subject of this report are available by calling +1 (877) 291-2683. The same important disclosures, with the exception of valuation methodology and risk discussions, are also available on Credit Suisse's disclosure website at <a href="https://rave.credit-suisse.com/disclosures">https://rave.credit-suisse.com/disclosures</a>. For valuation methodology and risks associated with any recommendation, price target, or rating referenced in this report, please refer to the disclosures section of the most recent report regarding the subject company.

This report is produced by subsidiaries and affiliates of Credit Suisse operating under its Global Markets Division. For more information on our structure, please use the following link: <a href="https://www.credit-suisse.com/who-we-are">https://www.credit-suisse.com/who-we-are</a> This report may contain material that is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject Credit Suisse or its affiliates ("CS") to any registration or licensing requirement within such jurisdiction. All material presented in this report, unless specifically indicated otherwise, is under copyright to CS. None of the material, nor its content, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of CS. All trademarks, service marks and logos used in this report are trademarks or service marks or service marks or of CS or its affiliates. The information, tools and material presented in this report are provided to you for information purposes only and are not to be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities or other financial instruments. CS may not have taken any steps to ensure that the securities referred to in this report are suitable for any particular investor. CS will not treat recipients of this report as its customers by virtue of their receiving this report. The investments and services contained or referred to in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about such investments or investment services. Nothing in this report constitutes investment, legal, accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate to your individual circumstances, or otherwise constitutes a personal recommendation to you. Please note in particular that the bases and levels of taxation may change. Information and opinions presented in this report have been obtained or derived from sources believed by CS to be reliable, but CS makes no representation as to their accuracy or completeness. CS accepts no liability for loss arising from the use of the material presented in this report, except that this exclusion of liability does not apply to the extent that such liability arises under specific statutes or regulations applicable to CS. This report is not to be relied upon in substitution for the exercise of independent judgment. CS may have issued, and may in the future issue, other communications that are inconsistent with, and reach different conclusions from, the information presented in this report. Those communications reflect the different assumptions, views and analytical methods of the analysts who prepared them and CS is under no obligation to ensure that such other communications are brought to the attention of any recipient of this report. Some investments referred to in this report will be offered solely by a single entity and in the case of some investments solely by CS, or an associate of CS or CS may be the only market maker in such investments. Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. Information, opinions and estimates contained in this report reflect a judgment at its original date of publication by CS and are subject to change without notice. The price, value of and income from any of the securities or financial instruments mentioned in this report can fall as well as rise. The value of securities and financial instruments is subject to exchange rate fluctuation that may have a positive or adverse effect on the price or income of such securities or financial instruments. Investors in securities such as ADR's, the values of which are influenced by currency volatility, effectively assume this risk. Structured securities are complex instruments, typically involve a high degree of risk and are intended for sale only to sophisticated investors who are capable of understanding and assuming the risks involved. The market value of any structured security may be affected by changes in economic, financial and political factors (including, but not limited to, spot and forward interest and exchange rates), time to maturity, market conditions and volatility, and the credit quality of any issuer or reference issuer. Any investor interested in purchasing a structured product should conduct their own investigation and analysis of the product and consult with their own professional advisers as to the risks involved in making such a purchase. Some investments discussed in this report may have a high level of volatility. High volatility investments may experience sudden and large falls in their value causing losses when that investment is realised. Those losses may equal your original investment. Indeed, in the case of some investments the potential losses may exceed the amount of initial investment and, in such circumstances, you may be required to pay more money to support those losses. Income yields from investments may fluctuate and, in consequence, initial capital paid to make the investment may be used as part of that income yield. Some investments may not be readily realisable and it may be difficult to sell or realise those investments, similarly it may prove difficult for you to obtain reliable information about the value, or risks, to which such an investment is exposed. This report may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the report refers to website material of CS, CS has not reviewed any such site and takes no responsibility for the content contained therein. Such address or hyperlink (including addresses or hyperlinks to CS's own website material) is provided solely for your convenience and information and the content of any such website does not in any way form part of this document. Accessing such website or following such link through this report or CS's website shall be at your own risk.

This report is issued and distributed in European Union (except Switzerland): by Credit Suisse Securities (Europe) Limited, One Cabot Square, London E14 4QJ, England, which is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Germany: Credit Suisse (Deutschland) Aktiengeselischaft regulated by the Bundesanstalt fuer Finanzdienstleistungsaufsicht ("BaFin"). United States and Canada: Credit Suisse Securities (USA) LLC; Switzerland: Credit Suisse AG, Brazil: Banco de Investimentos Credit Suisse (México) and Casa de Bolsa Credit Suisse (México), S.A., Institución de Banca Múltiple, Grupo Financiero Credit Suisse (México) and Casa de Bolsa Credit Suisse (México), S.A. de C.V., Grupo Financiero Credit Suisse (México) ("Credit Suisse Mexico"). This document has been prepared for information purposes only and is exclusively distributed in Mexico to Institutional Investors. Credit Suisse Mexico is not responsible for (wexturn), S.A. de c.v., Grupo Final note of Cedit Susse (wexturn) (Cedit Susses wexturn). This occurrient has been prepared of minorimation purposes only and is excusively distributed in mexico is not responsible to many any notion of this report to non-institutional investors by any third party. The authors of this report have not received payment or compensation from any entity or company other than from the relevant Credit Susses Group company employing them;

Japan: by Credit Suisse Securities (Japan) Limited, Financial Instruments Firm, Director-General of Kanto Local Finance Bureau (Kinsho) No. 66, a member of Japan Securities Dealers Association, The Financial Futures Association of Japan, Japan Investment Advisers Association, Type II Financial Instruments Firms Association, Hong Kong: Credit Suisse (Hong Kong) Limited; Australia: Credit Suisse Equities (Australia) Limited; Thailand: Credit Suisse Securities (Thailand) Limited, regulated by the Office of the Securities and Exchange Commission, Thailand, having registered address at 990 Abdulrahim Place, 27th Floor, Unit 2701, Rama IV Road, Silom, Bangrak, Bangkok 10500, Thailand, Tel. +66 2614 6000; Malaysia: Credit Suisse Securities (Malaysia) Sdn Bhd; Singapore: Credit Suisse AG, Singapore Branch; India: Credit Suisse Securities (India) Private Limited (CIN no. U67120MH1996PTC104392) regulated by the Securities and Exchange Board of India as Research Analyst (registration no. INF 000001030) and as Stock Broker (registration no. INZ000248233), having registered address at 9th Floor, Ceejay House, Dr.A.B. Road, Worli, Mumbai - 18, India, T-+91-22 6777 3777; South Korea: Credit Suisse Securities (Europe) Limited, Seoul Branch; Taiwan: Credit Suisse AG Taipei Securities Branch; Indonesia: PT Credit Suisse Sekuritas Indonesia; Philippines: Credit Suisse Securities (Philippines) Inc., and elsewhere in the world by the relevant authorised affiliate of the above.

Additional Regional Disclaimers

Australia: Credit Suisse Securities (Europe) Limited ("CSSEL") and Credit Suisse International ("CSI") are authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority ("FCA") and the Prudential Regulation Authority under UK laws, which differ from Australian Laws. CSSEL and CSI do not hold an Australian Financial Services Licence ("AFSL") and are exempt from the requirement to hold an AFSL under the Corporations Act (Cth) 2001 ("Corporations Act") in respect of the financial services provided to Australian wholesale clients (within the meaning of section 761G of the Corporations Act) (hereinafter referred to as "Financial Services"). This material is not for distribution to retail clients and is directed exclusively at Credit Suisse's professional clients and eligible counterparties as defined by the FCA, and wholesale clients as defined under section 761G of the Corporations Act. Credit Suisse (Hong Kong) Limited ("CSHK") is licensed and regulated by the Securities and Futures Commission of Hong Kong under the laws of Hong Kong, which differ from Australian laws. CSHKL does not hold an AFSL and is exempt from the requirement to hold an AFSL under the Corporations Act in respect of providing Financial Services. Investment banking services in the United States are provided by Credit Suisse Securities (USA) LLC, an affiliate of Credit Suisse Group. CSSU is regulated by the United States Securities and Exchange Commission under United States laws, which differ from Australian laws. CSSU does not hold an AFSL and is exempt from the requirement to hold an ÁFSL under the Corporations Act in respect of providing Financial Services. Credit Suisse Asset Management LLC (CSAM) is authorised by the Securities and Exchange Commission under US laws, which differ from Australian laws. CSAM does not hold an AFSL and is exempt from the requirement to hold an AFSL under the Corporations Act in respect of providing Financial Services. This material is provided solely to Institutional Accounts (as defined in the FINRA rules) who are Eligible Contract Participants (as defined in the US Commodity Exchange Act). Credit Suisse Equities (Australia) Limited (ABN 35 068 232 708) ("CSEAL") is an AFSL holder in Australia (AFSL 237237).

Malaysia: Research provided to residents of Malaysia is authorised by the Head of Research for Credit Suisse Securities (Malaysia) Sdn Bhd, to whom they should direct any queries on +603 2723 2020.

Singápore: This report has been prepared and issued for distribution in Singapore to institutional investors, accredited investors (each as defined under the Financial Advisers Regulations) only, and is also distributed by Credit Suisse AG, Singapore Branch to overseas investors (as defined under the Financial Advisers Regulations). Credit Suisse AG, Singapore Branch may distribute reports produced by its foreign entities or affiliates pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Singapore recipients should contact Credit Suisse AG, Singapore Branch at +65-6212-2000 for matters arising from, or in connection with, this report. By virtue of your status as an institutional investor, accredited investor, expert investor or overseas investor, Credit Suisse AG, Singapore Branch is exempted from complying with certain compliance requirements under the Financial Advisers Act, Chapter 110 of Singapore (the "FAA"), the Financial Advisers Regulations and the relevant

Notices and Guidelines issued thereunder, in respect of any financial advisory service which Credit Suisse AG, Singapore Branch may provide to you. **EU**: This report has been produced by subsidiaries and affiliates of Credit Suisse operating under its Global Markets Division

In jurisdictions where CS is not already registered or licensed to trade in securities, transactions will only be effected in accordance with applicable securities legislation, which will vary from jurisdiction to jurisdiction and may require that the trade be made in accordance with applicable exemptions from registration or licensing requirements.

This material is issued and distributed in the U.S. by CSSU, a member of NYSE, FINRA, SIPC and the NFA, and CSSU accepts responsibility for its contents. Clients should contact analysts and execute transactions through a Credit Suisse subsidiary or affiliate in

their home jurisdiction unless governing law permits otherwise.

Please note that this research was originally prepared and issued by CS for distribution to their market professional and institutional investor customers. Recipients who are not market professional or institutional investor customers of CS should seek the advice of

their independent financial advisor prior to taking any investment decision based on this report or for any necessary explanation of its contents.

CS may provide various services to US municipal entities or obligated persons ("municipalities"), including suggesting individual transactions or trades and entering into such transactions. Any services CS provides to municipalities are not viewed as "advice" within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. CS is providing any such services and related information solely on an arm's length basis and not as an advisor or fiduciary to the municipality. In connection with the provision of the any such services, there is no agreement, direct or indirect, between any municipality (including the officials, management, employees or agents thereof) and CS for CS to provide advice to the municipality. Municipalities should consult with their financial, accounting and legal advisors regarding any such services provided by CS. In addition, CS is not acting for direct or indirect compensation to solicit the municipality on behalf of an unaffiliated broker, dealer, municipal securities dealer, municipal advisor, or investment adviser for the purpose of obtaining or retaining an engagement by the municipality for or in connection with Municipal Financial Products, the issuance of municipal securities, or of an investment adviser to provide investment advisory services to or on behalf of the municipality. If this report is being distributed by a financial institution other than Credit Suisse AG, or its affiliates, that financial institution is solely responsible for distribution. Clients of that institution should contact that institution to effect a transaction in the securities mentioned in this report or require further information. This report does not constitute investment advice by Credit Suisse to the clients of the distributing financial institution, and neither Credit Suisse AG, its affiliates, and their respective officers, directors and employees accept any liability whatsoever for any direct or consequential loss arising from their use of this report or its content. No information or communication provided herein or otherwise is intended to be, or should be construed as, a recommendation within the meaning of the US Department of Labor's final regulation defining "investment advice" for purposes of the Employee Retirement Income Security Act of 1974, as amended and Section 4975 of the Internal Revenue Code of 1986, as amended, and the information provided herein is intended to be general information, and should not be construed as, providing investment advice (impartial or otherwise).

Copyright © 2019 CREDIT SUISSE AG and/or its affiliates. All rights reserved.

When you purchase non-listed Japanese fixed income securities (Japanese government bonds, Japanese municipal bonds, Japanese government guaranteed bonds, Japanese corporate bonds) from CS as a seller, you will be requested to pay the purchase